

## WEST Search History

DATE: Tuesday, July 09, 2002

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
<i>DB=USPT; PLUR=YES; OP=ADJ</i>			
L7	l4 and (excise or excision)	88	L7
L6	L5 and l4	0	L6
L5	activate near transgene	5	L5
L4	l2 and activate	141	L4
L3	l2 and activat\$	213	L3
L2	l1 and site specific	234	L2
L1	plant and recombinase	384	L1

END OF SEARCH HISTORY

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NEWS 2 Jan 25 BLAST(R) searching in REGISTRY available in STN on the Web  
NEWS 3 Jan 29 FSTA has been reloaded and moves to weekly updates  
NEWS 4 Feb 01 DKILIT now produced by FIZ Karlsruhe and has a new update  
frequency  
NEWS 5 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02  
NEWS 6 Mar 08 Gene Names now available in BIOSIS  
NEWS 7 Mar 22 TOXLIT no longer available  
NEWS 8 Mar 22 TRCTHERMO no longer available  
NEWS 9 Mar 28 US Provisional Priorities searched with P in CA/CAPLUS  
and USPATFULL  
NEWS 10 Mar 28 LIPINSKI/CALC added for property searching in REGISTRY  
NEWS 11 Apr 02 PAPERCHEM no longer available on STN. Use PAPERCHEM2 instead.  
NEWS 12 Apr 08 "Ask CAS" for self-help around the clock  
NEWS 13 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area  
NEWS 14 Apr 09 ZDB will be removed from STN  
NEWS 15 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB  
NEWS 16 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS  
NEWS 17 Apr 22 BIOSIS Gene Names now available in TOXCENTER  
NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available  
NEWS 19 Jun 03 New e-mail delivery for search results now available  
NEWS 20 Jun 10 MEDLINE Reload  
NEWS 21 Jun 10 PCTFULL has been reloaded  
NEWS 22 Jul 02 FOREGE no longer contains STANDARDS file segment  
  
NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,  
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),  
AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002  
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FILE 'HOME' ENTERED AT 17:50:51 ON 09 JUL 2002

=> file agricola caplus biosis  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'AGRICOLA' ENTERED AT 17:51:00 ON 09 JUL 2002

FILE 'CAPLUS' ENTERED AT 17:51:00 ON 09 JUL 2002

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FILE 'BIOSIS' ENTERED AT 17:51:00 ON 09 JUL 2002

COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC.(R)

=> s recombinase and plant

L1 171 RECOMBINASE AND PLANT

=> s l1 and excis?

L2 72 L1 AND EXCIS?

=> s l2 and (marker or transgene)

L3 40 L2 AND (MARKER OR TRANSGENE)

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 31 DUP REM L3 (9 DUPLICATES REMOVED)

=> d 1-10 ti

L4 ANSWER 1 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Nontransgenic crops from transgenic plants.

L4 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Two site-specific recombination system for **excising transgene** from **plant** leading to reduction of transmission of **transgene**

L4 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Self-**excising** polynucleotides containing the .phi.C31 **recombinase** gene for use in dicot and monocot plants

L4 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Inducible expression constructs for site-specific **recombinase** genes and their use in regulated **excision** of transforming DNA from **plant** genomes with selection of transformed plants

L4 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Methods for the controlled, automatic **excision** of heterologous DNA from transgenic plants and DNA-**excising** gene cassettes for use therein

L4 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Site-specific recombination of genes for gene stacking in **plant** and animal chromosomes using bacteriophage .phi.C31 irreversible and Cre reversible recombinases

L4 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Molecular control of **transgene** escape by a repressible **excision** system using controlled **recombinase** expression

L4 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI **Excision** of selectable **marker** genes from transgenic

plants.

L4 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1  
TI Cre/lox site-specific recombination controls the **excision** of a  
**transgene** from the rice genome

L4 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2002 ACS  
TI Nontransgenic crops from transgenic plants

=> d 2 pi

L4 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2002 ACS  
PATENT NO. KIND DATE APPLICATION NO. DATE  
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PI WO 2002016624 A1 20020228 WO 2000-SG124 20000825  
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,  
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW  
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE

=> d 8 so

L4 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
SO Nature Biotechnology, (June, 2002) Vol. 20, No. 6, pp. 575-580.  
<http://www.nature.com/nbt/>. print.  
ISSN: 1087-0156.

=> d 8 abv

'ABV' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid  
in at least one of the files. Refer to file specific help messages  
or the STNGUIDE file for information on formats available in  
individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ab

L4 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
AB Selectable **marker** genes are required to ensure the efficient  
genetic modification of crops. Economic incentives and safety concerns  
have prompted the development of several strategies (site-specific  
recombination, homologous recombination, transposition, and  
co-transformation) to eliminate these genes from the genome after they  
have fulfilled their purpose. Recently, chemically inducible site-specific  
**recombinase** systems have emerged as valuable tools for efficiently  
regulating the **excision** of transgenes when their expression is  
no longer required. The implementation of these strategies in crops and  
their further improvement will help to expedite widespread public  
acceptance of agricultural biotechnology.

=> d 8 au

L4 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
AU Hare, Peter D.; Chua, Nam-Hai (1)

=> d 15 so

L4 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2002 ACS

SO PCT Int. Appl., 90 pp.  
CODEN: PIXXD2

=> d 15 pi

L4 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2002 ACS  
PATENT NO. KIND DATE APPLICATION NO. DATE  
-----  
PI WO 2001036595 A2 20010525 WO 2000-US31600 20001116  
WO 2001036595 A3 20020124  
W: AU, BR, CA, HU, IL, JP, KR, MX, NZ, PL, US  
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE, TR  
BR 2000008910 A 20020129 BR 2000-8910 20001116  
EP 1200617 A2 20020502 EP 2000-986220 20001116  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR

=> d 20 so

L4 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2002 ACS  
SO Plant Journal (2000), 22(5), 461-469  
CODEN: PLJUED; ISSN: 0960-7412

=> d 25 so

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS  
SO U.S., 37 pp., Cont.-in-part of U.S. Ser. No. 861,802, abandoned.  
CODEN: USXXAM

=> d 25 pi

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS  
PATENT NO. KIND DATE APPLICATION NO. DATE  
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PI US 5658772 A 19970819 US 1994-281714 19940727  
JP 2001112477 A2 20010424 JP 2000-278280 19901219

=> d 23 so

L4 ANSWER 23 OF 31 AGRICOLA DUPLICATE 6  
SO Plant molecular biology, May 1999. Vol. 40, No. 2. p. 223-235  
Publisher: Dordrecht : Kluwer Academic Publishers.  
CODEN: PMBIDB; ISSN: 0167-4412

=> d 24 so

L4 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2002 ACS  
SO PCT Int. Appl., 85 pp.  
CODEN: PIXXD2

=> d 24 pi

L4 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2002 ACS  
PATENT NO. KIND DATE APPLICATION NO. DATE  
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PI WO 9737012 A1 19971009 WO 1997-AU197 19970327

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,  
 DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,  
 PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ,  
 VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 PW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,  
 GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,  
 ML, MR, NE, SN, TD, TG

CA 2250111	AA	19971009	CA 1997-2250111	19970327
AU 9721437	A1	19971022	AU 1997-21437	19970327
AU 717267	B2	20000323		
EP 922097	A1	19990616	EP 1997-913984	19970327
	R:	BE, CH, DE, ES, FR, GB, IT, LI, NL, SE		
JP 2000507446	T2	20000620	JP 1997-534743	19970327

=> d 24 ab

L4 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2002 ACS  
 AB A method of site-specific **excision** of a target gene from a transformation vector using a site-specific **recombinase** is described. This allows the transformation of the target organism with the removal of a selectable **marker** carried by the vector. **Excision** can be regulated or constitutive depending upon the promoter regulating the **recombinase** gene. As a result the same selectable **marker** can be used in a no. of sequential transformations. The method can be generally used to regulate **transgene** expression in genetically-manipulated organisms, for example to promote differentiation, de-differentiation, or any unidirectional developmental shift of a target cell which requires the time-specific expression of a particular gene. The method is particularly suited to the promotion of specific organogenesis in plants using organogenesis-promoting transgenes, wherein the organs which subsequently develop in said plants are genetically transformed with a desired gene but lack organogenesis-promoting transgenes. The use flp/frt and cre/loxP recombination systems in tobacco (*Nicotiana plumbaginifolia*) is demonstrated.

=> d 25-31 ti

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS  
 TI Use of the Cre/loxP system in site-specific recombination in **plant** cells

L4 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2002 ACS  
 TI **Recombinase** systems in plants

L4 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2002 ACS  
 TI Inducible ternary control of **transgene** expression and cell ablation in *Drosophila*

L4 ANSWER 28 OF 31 AGRICOLA  
 TI A system for insertional mutagenesis and chromosomal rearrangement using the Ds transposon and Cre-lox.

L4 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS  
 TI Exchange of gene activity in transgenic plants catalyzed by the Cre-lox site-specific recombination system

L4 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS  
 TI Directed **excision** of a **transgene** from the **plant** genome

L4 ANSWER 31 OF 31 AGRICOLA  
 TI Gene transfer with subsequent removal of the selection gene from the host genome.

DUPLICATE 7

=> d 25-26 ab

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS

AB Transformation and expression vectors that use the Cre/loxP system to bring about site-specific recombination in **plant** cells are described. The system is of potential use in the regulation of gene expression in plants and in the development of new phenotypes. The bacteriophage P1 Cre **recombinase** gene under control of the 35S promoter was introduced into tobacco plants by *stet* methods. Plants carrying a cassette with a 5' hpt (hygromycin phosphotransferase) gene, a polyadenylation site flanked by a pair of loxP sites and an Hra (sulfonyleurea-resistant acetolactate synthase) gene 3' to the polyadenylation site were also constructed. The Hra gene can only be expressed when the polyadenylation site is **excised** from the construct by loxP-mediated recombination, otherwise, the gene is lost during polyadenylation. These plants were hygromycin sensitive and sulfonyleurea resistant, when crossed with the Cre cassette-contg. plants, a significant fraction were resistant to hygromycin and sulfonyleurea.

L4 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2002 ACS

AB A review with several refs. Several site-specific DNA recombination systems have been shown to function in plants. **Excision** and integration of DNA relevant to genetic transformation have been described. Site-specific **excision** can remove selectable **marker** genes from **plant** genomes, permitting subsequent rounds of gene transfer with the same selection protocol. The elimination of **marker** genes from transgenic crop plants also eases concerns over the widespread release of antibiotic resistance genes. Site-specific integration of DNA has demonstrated the precise insertion of single-copy DNA into recombination sites previously placed in the **plant** genome. The reproducible insertion of DNA constructs into the same site permits anal. of gene alleles in the same chromosome configuration. Site-specific recombination has also been used to restructure **plant** genomes. Recombination between sites placed on the same or on different chromosomes has generated chromosome deletions, inversions and reciprocal chromosome translocations. Site-specific recombination of chromosomes *in vitro* can also fractionate large chromosome fragments. In this session, the authors will present findings on the ongoing development of site-specific recombination for monocot transformation, chromosome rearrangements, interspecies chromosome recombination, and anal. of **transgene** expression.

=> d 25 pi

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5658772	A	19970819	US 1994-281714	19940727
	JP 2001112477	A2	20010424	JP 2000-278280	19901219

=> d 26 so

L4 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2002 ACS

SO Biological Sciences Symposium, San Francisco, Oct. 19-23, 1997 (1997), 295-297 Publisher: TAPPI Press, Atlanta, Ga.  
 CODEN: 66GVA7

=> dd 29-31 ti

DD IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=> d 29-31 ti

L4 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Exchange of gene activity in transgenic plants catalyzed by the Cre-lox site-specific recombination system

L4 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS

TI Directed **excision** of a **transgene** from the **plant** genome

L4 ANSWER 31 OF 31 AGRICOLA

DUPLICATE 7

TI Gene transfer with subsequent removal of the selection gene from the host genome.

=> d 29-31 ab

L4 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS

AB The Cre-lox site-specific recombination system of bacteriophage P1 was used to **excise** a firefly luciferase (luc) gene which had previously been incorporated into the tobacco genome. The **excision** event was due to site-specific DNA recombination between two lox sequences flanking the luc gene and was catalyzed by the Cre **recombinase** introduced by cross-fertilization. Recombination resulted in the fusion of a promoter with a distally located hygromycin phosphotransferase (hpt) coding sequence and the **excision** event was monitored as a phenotypic change from expression of luc to expression of hpt. The efficiency of recombination was estd. from the exchange of gene activity and confirmed by mol. anal. The relevance to potential applications of site-specific deletion-fusion events for chromosome engineering are discussed.

L4 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS

AB The effectiveness of loxP-Cre directed **excision** of a **transgene** was examd. using phenotypic and mol. analyses. Two methods of combining the elements of this system, re-transformation and cross pollination, were found to produce different degrees of **excision** in the resulting plants. Two linked traits, .beta.-glucuronidase (GUS) and a gene encoding sulfonyleurea-resistant acetolactate synthase (ALSr), were integrated into the genome of tobacco and Arabidopsis. The ALSr gene, bounded by loxP sites, was used as the selectable **marker** for transformation. The directed loss of the ALSr gene through Cre-mediated **excision** was demonstrated by the loss of resistance to sulfonyleurea herbicides and by Southern blot anal. The .beta.-glucuronidase gene remained active. The **excision** efficiency varied in F1 progeny of different lox and Cre parents and was cor. with the Cre parent. Many of the lox .times. Cre F1 progeny were chimeric and some F2 progeny retained resistance to sulfonyleureas. Re-transformation of lox/ALS/lox/GUS tobacco plants with cre led to much higher efficiency of **excision**. Lines of tobacco transformants carrying the GUS gene but producing only sulfonyleurea-sensitive progeny were obtained using both approaches for introducing cre. Similarly, Arabidopsis lines with GUS activity but no sulfonyleurea resistance were generated using cross pollinations.

L4 ANSWER 31 OF 31 AGRICOLA

DUPLICATE 7

AB A general method of gene transfer that does not leave behind a selectable



**marker** in the host genome is described. A luciferase gene was introduced into the tobacco genome by using the hygromycin phosphotransferase gene (hpt) as a linked selectable **marker**. Flanked by recombination sites from the bacteriophage P1 Cre/lox recombination system, the hpt gene was subsequently **excised** from the **plant** genome by the Cre **recombinase**. The Cre-catalyzed **excision** event in the **plant** genome was precise and conservative--i.e., without loss or alteration of nucleotides in the recombinant site. After removal of the Cre-encoding locus by genetic segregation, plants were obtained that had incorporated only the desired **transgene**. Gene transfer without the incorporation of antibiotic-resistance markers in the host genome should ease public concerns over the field release of transgenic organisms expressing such traits. Moreover, it would obviate the need for different selectable markers in subsequent rounds of gene transfer into the same host.

=> d 29-31 so

L4 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS  
SO Plant Mol. Biol. (1992), 18(2), 353-61  
CODEN: PMBIDB; ISSN: 0167-4412

L4 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS  
SO Mol. Gen. Genet. (1992), 234(1), 49-59  
CODEN: MGGEAE; ISSN: 0026-8925

L4 ANSWER 31 OF 31 AGRICOLA DUPLICATE 7  
SO Proceedings of the National Academy of Sciences of the United States of America, Dec 1, 1991. Vol. 88, No. 23. p. 10558-10562  
Publisher: Washington, D.C. : National Academy of Sciences,  
CODEN: PNASA6; ISSN: 0027-8424

=> dis his

(FILE 'HOME' ENTERED AT 17:50:51 ON 09 JUL 2002)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 17:51:00 ON 09 JUL 2002

L1 171 S RECOMBINASE AND PLANT  
L2 72 S L1 AND EXCIS?  
L3 40 S L2 AND (MARKER OR TRANSGENE)  
L4 31 DUP REM L3 (9 DUPLICATES REMOVED)

=> s l2 and (stop or block?)

L5 11 L2 AND (STOP OR BLOCK?)

=> dup rem l5

PROCESSING COMPLETED FOR L5

L6 11 DUP REM L5 (0 DUPLICATES REMOVED)

=> d 1-11 ti

L6 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Two site-specific recombination system for **excising** transgene from **plant** leading to reduction of transmission of transgene

L6 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Inducible expression constructs for site-specific **recombinase** genes and their use in regulated **excision** of transforming DNA from **plant** genomes with selection of transformed plants

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Molecular control of transgene escape by a repressible **excision**

system using controlled **recombinase** expression

L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Inducible expression constructs for site-specific **recombinase**  
genes and their use in regulated **excision** of transforming DNA  
from **plant** genomes

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Methods for conditional transgene expression and trait removal in plants

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI A method of assembling large, complex vectors for **plant**  
transformation using the cre/loxP site-specific recombination system

L6 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Gene therapy vectors utilizing recombination and their use in antitumor  
therapy

L6 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
TI Control of **plant** gene expression.

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Regeneration of genetically modified whole **plant** from  
**plant** cell transfected with DNA sequence comprising regulatory  
regions and genes for phenotype-regulating protein, **recombinase**,  
and genetic repressor

L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Regeneration of genetically modified whole **plant** from  
**plant** cell transfected with DNA sequence comprising regulatory  
regions and genes for phenotype-regulating protein, **recombinase**,  
and genetic repressor

L6 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI **Recombinase**-directed chromosome engineering in plants

=> d 3 so

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2002 ACS  
SO U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U. S. Ser. No. 617,543.  
CODEN: USXXCO

=> d 3 pi

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2002 ACS

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002007500	A1	20020117	US 2001-783292	20010215
WO 2002006498	A1	20020124	WO 2001-FI670	20010716

PI

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HP, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

=> d 4 so

L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS  
SO PCT Int. Appl., 31 pp.  
CODEN: PIXXD2

=> d 4 pi

L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS  
PATENT NO. KIND DATE APPLICATION NO. DATE  
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PI WO 2001088164 A1 20011122 WO 2001-DE780 20010228  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,  
ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD,  
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DE 10024740 A1 20011129 DE 2000-10024740 20000519

=> d 5-11 ti

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Methods for conditional transgene expression and trait removal in plants

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI A method of assembling large, complex vectors for **plant**  
transformation using the cre/loxP site-specific recombination system

L6 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Gene therapy vectors utilizing recombination and their use in antitumor  
therapy

L6 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
TI Control of **plant** gene expression.

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Regeneration of genetically modified whole **plant** from  
**plant** cell transfected with DNA sequence comprising regulatory  
regions and genes for phenotype-regulating protein, **recombinase**,  
and genetic repressor

L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI Regeneration of genetically modified whole **plant** from  
**plant** cell transfected with DNA sequence comprising regulatory  
regions and genes for phenotype-regulating protein, **recombinase**,  
and genetic repressor

L6 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2002 ACS  
TI **Recombinase**-directed chromosome engineering in plants

=> d 5-11 ab

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS  
AB This invention relates to constructs for the conditional or regulated  
expression or **excision** of transgenes in plants using  
site-specific **recombinase** systems. The constructs comprise a  
variety of constitutive, inducible, tissue specific or developmental  
stage-specific promoters operably linked to either a transgene or the

elements of one or more site-specific **recombinase** system. By matching promoters, responsive to various inducers, **plant** tissues or **plant** developmental states with the **recombinase** systems, **stop** fragments and transgenes, virtually any trait may be expressed or **excised** at any **plant** development stage or in any **plant** generation.

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS

AB The present invention relates to a novel unconventional method for cloning large and multiple segments of DNA into a vector that makes use of the cre/loxP site-specific recombination system. More specifically the present invention provides nucleic acid sequences for selectively regulating site-specific recombination in favor of insertion of multiple segments of DNA in a **plant** transformation vector. In particular, the invention relates to the use of sequences in the recombination site that can be used in gene-stacking or other multigenic cloning strategies. The method uses an array of variants of the canonical loxP site that can recombine to generate loxP sites that are no longer functional and so **block** cre-mediated **excision** after recombination. In this manner, the sequences needed for the vector can be sequentially incorporated into the construct ("stacking"). The method can be used in combination with other site-specific recombination systems such as FLP/FRT. The compatibility of an array of loxP variants in site-specific recombination was tested. Some combinations of variants recombined at near-normal rates but others did not recombine at all and the sequences were organized into compatibility classes. Use of combinations of loxP sites to integrate one plasmid into another is demonstrated. Use of sets of loxP variants to stack sequences is also demonstrated by constructing a plasmid carrying genes conferring resistance to potato leafroll virus, potato virus Y, glyphosate and Colorado potato beetle. Transgenic potato plants expressing all four genes were obtained from single transformation events.

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AB Vector material useful for antitumor therapy contains: (a) a tumor cell sensitizing gene or genes of which expression in a tumor cell yields a sensitizing gene expression product having a potential to cause tumor cells to be killed and destroyed, or to be eliminated, or otherwise to be inactivated, or to be rendered sensitive and/or vulnerable to destruction; (b) a sensitizing gene promoter; (c) at least one control gene; and (d) a control gene expression regulatory system responsive in use in a transfected cell to the effect of a predetd. exogenous or endogenous expression inducing influence, e.g. ionizing radiation, heat or a chem. inducing agent, so as to induce expression of the control gene to yield an expression product having a capacity to establish an operative linkage between the sensitizing gene promoter and the sensitizing gene or genes effective to trigger and switch on or permit continuous or permanent expression of the latter to bring about continuous prodn. of the sensitizing gene expression product. This is preferably achieved by arranging for the control gene to encode a **recombinase** enzyme that acts on **recombinase** target sites in a Cre-loxP or FLP-frt site specific recombination system to remove an expression preventing **stop** cassette sequence between the sensitizing gene(s) and the promoter for the latter. In some embodiments the tumor sensitizing gene expression product will be an enzyme or other bioactive agent that can activate an inactive prodrug. This vector system has wide applications to cancer therapy. The objective of the present study is to provide improved means and methods for selectively killing or eliminating tumor cells using a low or transient dose of a gene expression agent to switch on a gene that produces an expression product within tumor tissue that has the effect of bringing the destruction or removal of tumor cells. Here, expression of the tumor sensitizing gene thymidine kinase results in gancyclovir activation and cell killing. This silenced or dormant killing mechanism can be activated by exposing the cells to an appropriate

stimulating influence which may include ionizing radiation or heat or chem. treatment. In this system the control gene encodes a **recombinase** enzyme that acts on **recombinase** agent sites to modify the vector material to establish operative linkage between sensitizing gene expression regulatory system and the sensitizing gene. The control gene may also encode a fusion proteins consisting of a **recombinase** and an intercellular trafficking protein such as virion protein VP22. An exogenous chem. inducing agent may be in the form of a hormone that interacts with a receptor that interacts with a hormone responsive element in the control gene expression system. Use of the vector to manuf. a medicament for use in antitumor therapy is described also.

L6 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB A method for making a genetically modified **plant** comprising regenerating a whole **plant** from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being separated by a **blocking** sequence flanked on either side by specific **excision** sequences, a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a repressible promoter, and a third gene that encodes the repressor specific for the repressible promoter. Also a method for making a genetically modified hybrid **plant** by hybridizing a first **plant** regenerated from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being separated by a **blocking** sequence flanked on either side by specific **excision** sequences to a second **plant** regenerated from a second **plant** cell that has been transfected with DNA sequences comprising a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a promoter that is active during seed germination, and growing a hybrid **plant** from the hybrid seed. **Plant** cells, **plant** tissues, **plant** seed and whole plants containing the above DNA sequences are also claimed.

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS

AB A method for making a genetically modified **plant** comprising regenerating a whole **plant** from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences, a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a repressible promoter, and a third gene that encodes the repressor specific for the repressible promoter. Also a method for making a genetically modified hybrid **plant** by hybridizing a first **plant** regenerated from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences to a second **plant** regenerated from a second **plant** cell that has been transfected with DNA sequences comprising a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a promoter that is active during seed germination, and growing a hybrid **plant** from the hybrid seed. **Plant** cells, **plant** tissues, **plant** seed and whole plants contg. the above DNA sequences are also claimed.

L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS

AB A method for making a genetically modified **plant** comprising regenerating a whole **plant** from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences, a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a repressible promoter, and a third gene that encodes the repressor specific for the repressible promoter. Also a method for making a genetically modified hybrid **plant** by hybridizing a first **plant** regenerated from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences to a second **plant** regenerated from a second **plant** cell that has been transfected with DNA sequences comprising a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a promoter that is active during seed germination, and growing a hybrid **plant** from the hybrid seed. **Plant** cells, **plant** tissues, **plant** seed and whole plants contg. the above DNA sequences are also claimed.

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AB A review with 37 refs. Directed recombination of specific sequences can be utilized to bring about profound changes in gene expression and genome organization. In past years, the deployment of site-specific recombination systems in the **plant** genome has produced site-directed **excision** and inversion of transgenes, integration of exogenous DNA into genomic recombination sites, and the rearrangement of chromosome segments. In particular, the rearrangement events that involve large segments of host DNA represent a novel approach to genome engineering and show promise for precise, predictable and reproducible restructuring of higher eukaryotic genomes. In the light of recent reports of **plant** genome syntenry, the concept of reshuffling **blocks** of chromosome information into new combinations may lead to exciting opportunities for creating new **plant** varieties for basic research and practical applications.

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001036595	A2	20010525	WO 2000-US31600	20001116
	WO 2001036595	A3	20020124		
	W: AU, BR, CA, HU, IL, JP, KR, MX, NZ, PL, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	BR 2000008910	A	20020129	BR 2000-8910	20001116
	EP 1200617	A2	20020502	EP 2000-986220	20001116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5723765	A	19980303	US 1995-477559	19950607

CA 2196410	AA	19960215	CA 1995-2196410	19950731
WO 9604393	A2	19960215	WO 1995-US9595	19950731
WO 9604393	A3	19960307		
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9532050	A1	19960304	AU 1995-32050	19950731
AU 696668	B2	19980917		
EP 775212	A2	19970528	EP 1995-928199	19950731
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1161717	A	19971008	CN 1995-194442	19950731
BR 9508471	A	19971028	BR 1995-8471	19950731
JP 10503377	T2	19980331	JP 1995-506650	19950731
ZA 9506410	A	19960311	ZA 1995-6410	19950801
US 5925808	A	19990720	US 1997-995161	19971219
US 5977441	A	19991102	US 1998-63927	19980422

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US 5925808	A	19990720	US 1997-995161	19971219
US 5977441	A	19991102	US 1998-63927	19980422

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SO Curr. Opin. Biotechnol. (1996), 7(2), 181-6  
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